

### **REMARKS**

In a preliminary matter, the final Official Action issued on January 12, 2009, has repeated verbatim the objection to the specification that was set forth in the first Official Action dated June 25, 2008. As part of the Response filed on September 25, 2008, however, Applicants submitted a substitute specification in which numerous apparent typographical and orthographical errors were rectified, including those on page 1 at lines 10 and 11, which are specifically highlighted in the repeated objection. It is believed that the amendments presented in the substitute specification are sufficient to overcome the objection to the specification. Accordingly, Applicants respectfully renew the request that this objection be withdrawn upon reconsideration.

Applicants wish to cooperate with the Examiner, however, in improving the form and expression of the specification. Accordingly, further guidance is respectfully requested regarding any informalities that may remain in the substitute specification and that should be removed by amendment.

In a second preliminary matter, new claims 10 to 16 are introduced into the application. New claim 10 finds a basis in claim 2 as originally filed and in the clean copy of the substitute specification in the paragraph bridging pages 16 and 17, *inter alia*. New claims 11 to 16 find a basis throughout the specification, in particular beginning on page 7 at line 5 and continuing to page 8 at line 11 of the clean copy of the substitute specification, in the examples of the invention, and in the claims as originally filed, *inter alia*. Accordingly, it is believed that no new matter is introduced into the application by new claims 10 to 16.

In a third preliminary matter, claim 1 is amended herein to further improve its clarity. For example, a percentage symbol is inserted in line 3, the designation “(d)” is added to the proviso, and several commas are replaced with semicolons. These amendments are purely formal and unrelated to patentability. Accordingly, it is believed that the scope of the claims is unchanged and that no new matter is introduced into the application by these amendments.

Claim 1 is also amended herein to clarify that the molding composition is thermoplastic. Claim 1 is further amended to specify that aromatic polyester copolymer (a) is a required component of the molding composition, and that polyesters (b), (c), and (d) are optional components. A basis for these amendments may be found in the clean copy of the substitute specification on page 2 at lines 5 to 9, on page 4 at lines 9 to 19, in the Examples of the invention, and in the claims as originally filed, *inter alia*. Accordingly, it is believed that no new matter is introduced into the application by these amendments.

More specifically, with respect to the term “thermoplastic,” Applicants point to the experimental procedures in which the molding composition is compounded, pelletized, pre-dried, melted, extruded, and formed into an article by injection molding. Example 1 (paragraph bridging pages 26 and 27 of the clean copy of the substitute specification) is representative. The same technique is also used in Examples 2 through 7, however. It is thus apparent that every working example in the description is a thermoplastic material.

Also more specifically, with respect to aromatic polyester copolymer (a), the portion of the specification from page 4 that is cited above is reproduced here in full:

To overcome these shortcomings, an injection molded article is formed from an aromatic polyester copolymer having repeating units derived from terephthalic acid, a metal salt of sulfonic acid, an aliphatic dicarboxylic acid, ethylene glycol and diethylene glycol. The article, which has enhanced performance properties, in particular heat resistance and moldability, includes reinforcements and fillers, crystallization accelerator and lubricant to facilitate crystallization of the aromatic polyester molding composition resulting in improvement of moldability.

This paragraph appears immediately under the heading “Disclosure of Invention.” Plainly, then, the injection molded article of the invention can be required to include the aromatic polyester copolymer described in the quoted paragraph. Moreover, the described aromatic polyester copolymer includes all of the repeat units that are included in aromatic polyester copolymer (a). Polyesters (b), (c), and (d), which are not mentioned in the quoted paragraph, are described on pages 5 and 6 as part of the “Best Mode for Carrying Out the Invention.” It follows by logic that

polyesters (b), (c), and (d) are desirable but still merely optional components of the injection molded article described in the portion of the specification that is reproduced above.

Further in this connection, Applicants respectfully submit that the amendments to claim 1 presented herein overcome the rejection under 35 U.S.C. § 112 that is set forth in the first Official Action and in the final Official Action, because the scope of the newly amended claim 1 does not include any embodiments in which the amount of copolymerized residues of aromatic dicarboxylic acid in polyester (d) is undefined. In particular, polyester (d) can no longer be the sole polyester component of the recited molding composition, because aromatic polyester copolymer (a) is required to be present. Aromatic polyester copolymer (a) includes copolymerized terephthalic acid, which is an aromatic dicarboxylic acid. Therefore, the amount of aromatic dicarboxylic acid in polyester (d) is less than that the amount of copolymerized terephthalic acid in aromatic polyester copolymer (a) and also less than the amount of copolymerized aromatic dicarboxylic acid in polyesters (b) and (c), should these polyesters be present in the molding composition. Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. § 112, second paragraph, be withdrawn upon reconsideration in light of the amendments to claim 1 presented herein.

Turning now to substantive matters, the final Official Action issued on January 12, 2009, has repeated and made final the rejection of claims 1, 2, 3, 5, and 6 under 35 U.S.C. § 102 as anticipated by and under § 103 as obvious over U.S. Patent No. 5,969,009, issued to Terada et al. (hereinafter "Terada"). These are the sole substantive reasons set forth in the Official Action why the present application should not be allowed. The facts and reasoning set forth earlier in the prosecution are neither withdrawn nor abandoned. In addition, Applicants respectfully traverse these rejections for the following reasons.

First, it is respectfully submitted that the final Official Action has conflated thermal degradation and compost degradability, which are two separate and uncorrelated degradation mechanisms. See Response to Arguments in the last

paragraph of page 8. Thermoplastic materials melt and flow when heated to temperatures near their melting point. Thermoset materials do not melt but rather degrade thermally; that is to say, they scorch or burn.

For an indication of what those of skill in the art understand by the terms “thermoplastic” and “thermosetting”, the Examiner is respectfully referred to a general reference such as the Wikipedia. There, for example, in an article entitled “Thermoplastics” (<http://en.wikipedia.org/wiki/Thermoplastic>, accessed on April 14, 2009), it is explained that

Thermoplastics **can go through melting/freezing cycles repeatedly** and the fact that they can be reshaped upon reheating gives them their name.  
[Emphasis supplied.]

In contrast, an article entitled “Thermosetting polymer” ([http://en.wikipedia.org/wiki/Thermoset\\_plastic](http://en.wikipedia.org/wiki/Thermoset_plastic), accessed on April 14, 2009) explains that

Uncontrolled reheating of the [thermoset] material results in **reaching the decomposition temperature before the melting point is obtained**. Therefore, a thermoset material cannot be melted and re-shaped after it is cured.  
[Emphasis supplied.]

It is moreover apparent from these two definitions that thermosetting materials and thermoplastic materials are mutually exclusive categories.

Compost degradability, in contrast, is a type of biodegradability. Here, the reason for the degradation is not related to an excessively high temperature; rather, biodegradable materials are “capable of being broken down [or degraded] especially into innocuous products by the action of living things ([such] as microorganisms).” See <http://www.merriam-webster.com/dictionary/biodegradable>, accessed on April 14, 2009. Referring once more to the Wikipedia,

A compostable material biodegrades substantially under specific composting conditions. It is metabolized by the microorganisms, being incorporated into the organisms or converted into humus.

See the article entitled “Composting” (<http://en.wikipedia.org/wiki/Composting>, accessed on April 14, 2009).

Clearly, then, thermal degradation and compost degradability are two separate routes to degradation with two different mechanisms of action and two different results. In fact, the properties of being thermally degradable (or not) and biodegradable (or not) are completely uncorrelated with each other. For example, polylactic acid is thermoplastic and biodegradable, but polybutylene terephthalate is thermoplastic and not biodegradable. Biodegradable thermosetting urea-resin compositions have been described in U.S. Patent No. 5,837,755; however, vulcanized rubber is thermosetting and not biodegradable.

In this context, then, Applicants briefly reiterate several points that were made in the Response filed on September 25, 2008. First, Terada describes thermosetting compositions. See, for example, the Abstract of Terada. In contrast, Applicants' claimed invention is an injection molded product made from a thermoplastic molding composition. Second, the compositions described by Terada are not biodegradable. In fact, the terms "biodegradable" and "compostable" do not even appear in the text of Terada. Newly amended claim 1, however, specifically recites that the molding composition is compost degradable.

Plainly, Terada does not identically set forth the invention of claim 1, as amended herein. M.P.E.P. § 2131. Nor does Terada provide any rationale, teaching or suggestion that would lead one of ordinary skill in the art to Applicants' claimed invention. M.P.E.P. § 2143. It follows by well-established law that the claimed invention is neither anticipated by nor obvious over Terada. Consequently, Applicants respectfully request that the rejections of newly amended claim 1 under 35 U.S.C. §§ 102 and 103 be withdrawn upon reconsideration.

In closing, the rejections of claim 6 are rendered moot by its cancellation without prejudice in the Response filed on September 25, 2008. Claims 2, 3, 5 and 7 though 10 depend, directly or indirectly, from independent claim 1. It follows by statute that these claims are also not anticipated and not obvious, for at least the reasons set forth above with respect to newly amended independent claim 1.

Accordingly, it is further respectfully requested that the rejections of claims 2, 3 and 5 under 35 U.S.C. §§ 102 and 103 also be withdrawn upon reconsideration.

**Conclusion**

A Petition for an Extension of Time of one month and the required fee for the Petition are submitted herewith. Should any further fee be required in connection with the present response, the Examiner is authorized to charge such fee, or to render any credit, to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

In view of the foregoing amendments and remarks, it is believed that all claims are in condition for allowance, and such action is earnestly solicited. In closing, the Examiner is invited to contact the undersigned by telephone at (302) 892-1004 to conduct any business that may advance the prosecution of the present application.

Respectfully submitted,

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